

## **Multi-criteria Integrated Resource Assessment (MIRA)**

### **Questions and Answers**

**Q: What is MIRA?**

MIRA is an approach and tool that EPA has developed to assist program managers' consideration of a broad array of scientific and technical information in their program and policy decisions. MIRA assists program managers by organizing and comparing pieces of relevant project data and information. It allows decision makers to compare different decision options based upon one or more common criteria and become more informed regarding the various criteria and how those criteria can be considered. With respect to Appalachian surface coal mining, MIRA was used to organize an extensive set of technical data and generate summary information to facilitate program management decisions. In this case, the MIRA approach promoted consistency by allowing decision makers from three EPA regions to review, discuss and reach consistency and consensus using a common set of data for discussion and analysis.

**Q: Was MIRA developed specifically for coal mining?**

No. MIRA is an existing approach that EPA decision makers have utilized in a variety of contexts, including developing budgets and making certain designations under the Clean Air Act. More information about MIRA can be found on the EPA Region 3 website (<http://www.epa.gov/reg3esd1/data/mira.htm>).

**Q: What information was used in the MIRA screening analysis?**

The data in the MIRA screening analysis is available on EPA's website. The data was obtained from the Corps permit application, from the Surface Mining Control and Reclamation Act permit application and from watershed-level data available to EPA from public sources such as the USGS and State Section 303(d) lists. The same categories of data were entered for each permit application. The permit applicants were provided with an opportunity to confirm or correct certain categories of data and many took advantage of this opportunity. Each piece of data used in the MIRA analysis for this screening application was relevant to one or more of the considerations required by the Section 404(b)(1) Guidelines.

**Q: How was the information generated by the MIRA analysis used by EPA to decide which permit applications would be subject to enhanced coordination?**

MIRA was used by EPA officials to screen available information on the proposed projects and assist EPA decision makers so in their decisions about which permits to further evaluate. This process allowed EPA to organize the relevant data for all mines into a central location. Using the data, EPA reviewers were able to better understand the mining impacts, including cumulative impacts. Data that is relevant to evaluation under the Section 404(b)(1) Guidelines was gathered and input into MIRA. MIRA was then used to assist program managers in considering the data in various combinations, to identify potential areas of concern, and analyze the proposed mines in the context of the Section 404(b)(1) Guidelines. After reviewing the information provided through the MIRA screening and conducting additional analysis, EPA decision makers determined which permit applications would be on the initial list.

**Q: Did EPA use MIRA to create a new standard for proposed permit review?**

No. MIRA does not create a new standard. The data input into the MIRA analysis are the same data and criteria that would be considered pursuant to the Section 404(b)(1) Guidelines. In the end, each permit application is subject to review under the Section 404(b)(1) Guidelines. MIRA was not used as a substitute or surrogate for the Section 404(b)(1) Guidelines analysis. The advantage of using MIRA in this particular circumstance is to provide a consistent and timely relative review of all permit applications subject to the enhanced coordination procedures.

**Q: How was the use of MIRA appropriate given that MIRA is not designed to make discrete decisions, such as decisions about a permit application?**

The MIRA process did not make discrete decisions about particular permit applications. It simply facilitated the analysis and supported the discussions regarding the aquatic ecosystem, the proposed applications' effects on that ecosystem, and potential compliance with the Section 404(b)(1) Guidelines.

**Q: What evaluation was conducted outside of MIRA?**

Throughout the 45-day review period, EPA Regional experts have been evaluating available data on the proposed mines and condition of the watersheds in which they are proposed. This review focused on placing available data on environmental effects in the context of the 404(b)(1) Guidelines and evaluating the reasonable potential for the proposed action to violate one or more of the requirements of the Guidelines. Representatives from EPA Regions 3, 4, and 5 met on multiple occasions to discuss concerns and ensure all permit applications were evaluated in a consistent manner and using consistent criteria. EPA also consulted with representatives of the U.S. Fish and Wildlife Service, U.S. Geologic Service, and the Corps to solicit their professional knowledge and feedback.